

Appendix 1

Procedure for Imitative Treatment for Aprosodia

Organization: Treatment is a six-step continuum arranged from easiest (most cueing) to hardest (least cueing). Treatment of each target sentence is governed by the clinician's perceptual judgment of the participant's success in achieving the appropriate prosody for the four target emotions: **happy**, **sad**, **angry**, and **neutral**.

Materials: Sentence stimuli cards.

Procedure: Four rules govern the clinician's use of the task continuum:

- 1 Treatment begins at Step One for each treated sentence.
- 2 The criterion for advancement is three consecutive correct responses at each step. The participant will have five attempts at each step to obtain three correct consecutive responses. If participant fails to produce three correct consecutive responses, clinician will drop back to the previous step and try to elicit three consecutive correct responses at that step.
- 3 Discontinue current sentence if three correct consecutive responses are not elicited after dropping back two times.
- 4 If participant is unable to produce three consecutive correct responses at Step One, repeat Step One two more times. If still unable to produce three consecutive correct responses, discontinue current sentence.

Step One

First I am going to say a sentence in a (sad, happy, angry, neutral) tone of voice. Just listen the first time. Then I want you to watch and listen and try to say it right along with me. Use my same tone of voice.

Clinician says the sentence once while urging the participant to watch and listen. Clinician and participant then say the sentence in unison three times. When participant has repeated the sentence with clinician in the appropriate tone of voice three times consecutively, move on to Step Two.

Step Two

Now I am going to say a sentence and I want you to watch me and listen carefully. After I finish, I want you to say the same sentence, using the same tone of voice I used.

Clinician says the sentence with the target emotion (happy, sad, angry, neutral), modeling both the tone of voice and facial expression. Perceptual judgment of participant's success in achieving appropriate prosody is based on use of appropriate voice tone but NOT facial expression.

Step Three

Now I am going to say a sentence and after I finish, I want you to say the same sentence, using the same tone of voice I used.

Clinician says the sentence with the target emotion (happy, sad, angry, neutral) but with his or her entire face concealed. Sentence stimuli cards may be used to cover face, with sentence facing away from participant.

Step Four

Now I am going to say a sentence and I want you to say it after me, but I want you to use a (happy, sad, angry) tone of voice.

When the stimulus response is happy, sad or angry, clinician produces the sentence in a neutral tone of voice. When stimulus response is neutral, clinician produces sentence using one of the other voice tones.

Step Five

Now I am going to ask you a question and I want you to answer me using the same sentence.

If stimulus response is happy, sad, or angry, the clinician will ask:

Why are you so (happy, sad, angry)?

If stimulus is neutral, clinician will ask an appropriate factual question. For example, if the appropriate stimulus response is the sentence "We are leaving on vacation today," the clinician may ask, "When are you leaving on vacation?"

Step Six

Now I want you to imagine that I am a family member and you have to tell me exactly how you feel. Use the same sentence and tone of voice.